

INDEX

SOVIET PLANT PHYSIOLOGY
Volume 21, Numbers 1-6, 1974

THE END

AUTHOR INDEX

SOVIET PLANT PHYSIOLOGY Volume 21, Numbers 1-6, 1974

(A translation of *Fiziologiya Rastenii*)

A

Abdullaev, A. A. - 947
Abralov, A. A. - 868
Agapova, L. P. - 406
Aksanova, N. P. - 349, 478,
 769
Alekseev, A. B. - 982
Andreeva, T. F. - 250, 753
Angelova, A. A. - 848
Anisimov, A. A. - 1003
Antipov, N. I. - 1064
Arman, L. A. - 419
Artamonov, V. I. - 842
Astafurova, T. P. - 82
Atanasov, A. I. - 848
Avdeeva, T. A. - 250, 753
Aver'yanov, A. A. - 406
Avundzhyan, É. S. - 693
Ayupova, A. T. - 1057

B

Babushkin, L. N. - 529
Bagautdinova, R. I. - 936
Bakanova, L. V. - 673
Bakumenko, N. I. - 108
Balina, N. V. - 514
Bannikova, V. P. - 652
Barabal'chuk, K. A. - 529
Baranova, Z. A. - 679
Batyrova, M. V. - 800
Bavrina, T. V. - 349, 478, 769
Bekina, R. M. - 192, 378
Belyustin, A. A. - 172
Bessmel'tseva, L. M. - 234
Betina, M. I. - 982
Bilderling, N. G. - 702
Blekhman, G. I. - 91, 961
Bobrov, V. A. - 433
Bochkareva, É. V. - 690
Boichenko, E. A. - 230
Bokarev, K. S. - 525, 1062
Bolyakina, Yu. P. - 463
Borisova, T. A. - 260
Britikov, E. A. - 260

Budagovskaya, N. V. - 559
Butenko, R. G. - 74, 486
Bystrova, E. I. - 118

C

Chailakhyan, M. Kh. - 883
Chaplygina, N. S. - 571
Chashchukhin, V. A. - 255, 809
Chekulaeva, L. N. - 291
Chel'tsova, L. P. - 597
Chibisov, A. K. - 917
Chigrin, V. V. - 234, 728
Chirkova, T. V. - 82
Chmulev, V. M. - 890
Chudnyi, A. V. - 78

D

Daletskaya, I. A. - 97
Daletskaya, T. V. - 763
Danil'chenko, A. M. - 658
Degterev, E. V. - 982
Derevtsova, T. F. - 903
Dontsova, S. V. - 745
Drozdov, S. N. - 1067
Drozdova, I. S. - 735
Durmishidze, S. V. - 59

E

Éidel'nant, N. M. - 658
Erkeev, M. I. - 125
Ershova, A. N. - 851
Esipova, I. V. - 658
Evseev, V. M. - 728
Evstigneeva, Z. G. - 414

F

Fedorov, A. K. - 597
Fedorov, P. S. - 967
Fedorova, S. A. - 623
Fedulova, Yu. P. - 721
Filatov, P. A. - 151
Filin-Koldakov, B. V. - 728

Florenskaya, T. G. - 199
Frid, A. S. - 679
Frolova, R. I. - 151

G

Galkin, V. I. - 508
Gamanets, L. V. - 591
Gamburg, K. Z. - 591
Gavrilenko, V. F. - 559
Genkel', P. A. - 91, 424, 673,
 699, 1075
Gerasimov, N. N. - 216
Gevorkyan, Zh. G. - 324
Giller, Yu. E. - 745
Glagoleva, T. A. - 923
Gleba, Yu. Yu. - 486
Gogoleva, L. A. - 893
Golovchenko, G. G. - 714
Golubev, A. I. - 216
Golyanovskaya, S. A. - 349,
 478
Gopalo, Yu. V. - 728
Gordon, L. Kh. - 216
Grekovich, A. L. - 172
Grif, V. G. - 1042
Gryzhankova, L. N. - 230

I

Ibragimov, A. P. - 324, 868
Imamaliev, A. I. - 790
Iskhakov, F. M. - 724
Ivanov, B. F. - 851
Ivanova, A. S. - 826
Ivanova, D. I. - 623, 795
Ivanova, R. P. - 1067
Ivanova, Z. P. - 40
Izmailov, S. F. - 419, 1008

K

Kabanov, V. V. - 318, 684, 1013
Kadyrov, Ch. Sh. - 1057
Kalacheva, G. S. - 43
Kalashnikov, Yu. E. - 330, 555
Kaler, V. L. - 903

Kalinin, V. A. - 441
 Kamanina, M. S. - 1003
 Kaptsynel', Yu. M. - 226
 Karimov, Kh. Kh. - 745
 Karmanov, V. G. - 167
 Karnikova, L. D. - 309
 Karpushkin, L. T. - 367
 Karyakin, A. V. - 917
 Karyakina, T. I. - 199
 Kats, K. M. - 87
 Kaverina, A. V. - 637
 Kayushin, L. P. - 291
 Kazantseva, O. F. - 226
 Kazuto, O. N. - 221
 Kefeli, V. I. - 131
 Khabarova, A. A. - 990
 Khachidze, O. T. - 59
 Khalidova, G. B. - 975
 Khammatova, I. G. - 967
 Kharanova, S. I. - 1062
 Khavkin, É. É. - 210, 409
 Khazhina, T. G. - 203
 Khazova, I. V. - 82
 Khitrov, Yu. A. - 32, 861
 Khokhlova, L. P. - 203
 Kholobrada, M. - 820
 Kholodova, V. P. - 463
 Khovanskaya, N. V. - 22
 Kirik, N. N. - 136
 Kirikoi, Ya. T. - 645
 Kitsno, V. E. - 136
 Klimov, S. V. - 739
 Klimovitskaya, Z. M. - 1018
 Klyachko-Gurvich, G. L. - 498
 Kolesnik, T. I. - 267, 772
 Kolesnikov, P. A. - 333, 394
 Konarev, V. G. - 772
 Kondrat'ev, M. N. - 629
 Kondratyuk, O. K. - 136
 Konstantinova, T. N. - 349, 478, 769
 Korbut, V. L. - 19, 336
 Kornilov, A. A. - 942
 Koshelev, Yu. P. - 805
 Koshkin, V. A. - 508
 Kositsin, A. V. - 975
 Kosulina, L. G. - 612
 Kovaleva, L. V. - 260
 Kozitskaya, V. N. - 240
 Krasavina, M. S. - 1
 Krasnovskii, A. A. - 373
 Krasovskii, L. I. - 255, 809
 Kretovich, V. L. - 199, 414
 Kruzhilin, A. S. - 836
 Ktitorova, I. N. - 990
 Kulaeva, O. N. - 580
 Kunchenko, T. A. - 508
 Kupriyanova, A. S. - 1024

Kurella, G. A. - 433
 Kurkova, E. B. - 28
 Kustenko, N. G. - 858
 Kutyshenko, V. P. - 291
 Kutyurin, V. M. 555, 917
 Kuzina, G. V. - 309
 Kuznetsov, E. D. - 40

L

Laisk, A. Kh. - 928
 Laman, N. A. - 244, 604
 Lanetskii, V. P. - 728
 Lazareva, A. V. - 291
 Lebedeva, N. I. - 597
 Le Thi Muoi - 131
 Levina, A. I. - 967
 Levina, V. V. - 424
 Levitin, M. G. - 999
 Likholat, T. V. - 779
 Linskens, H. F. - 878
 Lisityna, R. A. - 972
 Livshin, A. Z. - 101
 Lobanova, Z. I. - 1018
 Loi, N. P. - 1057
 Lugovaya, E. Sh. - 917
 Lukashevich, I. V. - 967
 Lukin, A. V. - 895
 Lyalin, O. O. - 990
 Lysenko, G. G. - 192, 378

M

Maevskaya, A. N. - 505
 Magomedov, I. M. - 908
 Makeev, A. M. - 851
 Makovkina, L. E. - 333, 394
 Maksimov, G. B. - 172
 Malinovskii, V. I. - 873
 Maslov, A. I. - 669
 Matskov, F. F. - 182
 Meleshchenko, S. N. - 167, 994
 Mel'nikov, P. V. - 32, 448, 861
 Merkis, A. I. - 273
 Metlitskii, L. V. - 758
 Mikhalevskaya, O. B. - 521
 Mikheeva, S. A. - 566
 Milyaeva, É. L. - 478
 Mokronosov, A. T. - 936
 Moldau, Kh. A. - 663
 Molodyuk, O. A. - 349, 769
 Morozova, T. M. - 779
 Moshkina, L. G. - 342
 Moshkov, B. S. - 22, 532
 Motorina, M. V. - 28
 Murav'eva, A. S. - 216
 Murei, I. A. - 7, 385, 1048
 Musatenko, L. I. - 652

Musatova, N. A. - 260
 Mutuskin, A. A. - 333, 394
 Myasoedov, N. A. - 318, 684, 1013

N

Naumova, Z. I. - 409
 Nezhinskaya, G. A. - 1057
 Nichiporovich, A. A. - 7, 250, 385, 739
 Nikolaeva, L. N. - 493
 Nikolaeva, M. G. - 279, 763
 Nikolaeva, M. K. - 547
 Nikolov, T. K. - 848
 Novikova, G. M. - 910

O

Obolonskii, V. V. - 566, 887
 Okanenko, A. S. - 733
 Okon, M. S. - 291
 Opritov, V. A. - 441
 Oshchepkov, V. P. - 373
 Osipova, O. P. - 547
 Osmolovskaya, N. G. - 172
 Ovcharov, K. E. - 805
 Ovchinnikova, M. F. - 69
 Oya, V. M. - 928

P

Paramonova, N. V. - 468
 Pavlov, A. N. - 267, 762
 Perdrizet, E. - 47
 Perova, A. Ya. - 521
 Peruanskii, Yu. V. - 979
 Petinov, N. S. - 537
 Petrochenko, E. I. - 333, 394
 Petrova, V. N. - 279, 763
 Petrovskaya-Baranova, T. P. - 1033
 Fiskunov, M. D. - 525
 Platonova, T. A. - 758
 Plekhanova, L. S. - 324
 Pleshkov, A. S. - 629
 Pleshkov, B. P. - 629
 Podchufarova, G. M. - 903
 Polikarpova, F. Ya. - 1037
 Polyakov, M. A. - 367
 Polyakova, E. N. - 763
 Polyanskaya, L. A. - 800
 Popazova, A. D. - 226
 Porollo, V. I. - 342
 Pospelov, V. A. - 779
 Potapov, N. G. - 612
 Prokazin, E. P. - 78
 Prokhorova, T. B. - 1037

Prokof'ev, A. A. - 87
Prokopivnyuk, L. M. - 1018
Pruidze, G. N. - 59
Prusakova, L. D. - 1067
Pshenova, K. V. - 333, 394
Pushkin, A. V. - 414
Pustovoitova, T. N. - 1075

R

Rakhimbaev, I. - 972
Rakitin, Yu. V. - 155, 493, 1072
Razumova, N. A. - 172
Rekoslavskaya, N. I. - 591
Rodygina, T. N. - 923
Rogatykh, N. P. - 428, 585
Romanova, L. V. - 285
Rotfarb, R. M. - 903
Rubin, B. A. - 378, 559
Rybalova, B. A. - 87
Rybin, I. A. - 566, 887
Rykalova, N. I. - 203

S

Saakov, V. S. - 508
Safarov, Sh. - 324
Sagdullaev, Kh. Kh. - 868
Sakai, A. - 113
Salganik, R. I. - 779
Sal'kova, E. G. - 758
Samygina, G. A. - 101
Satarova, N. A. - 91
Sautich, M. A. - 728
Semenenko, V. E. - 291, 947
Semikhato, O. A. - 97
Semushina, L. A. - 508
Shaldzhyan, M. M. - 693
Shapovalov, A. A. - 1029
Sharova, N. E. - 342
Shayakhetov, I. F. - 772
Shchelkunova, S. E. - 54
Shcherbakova, B. I. - 303
Shcherbakov, V. G. - 623
Shevyakova, N. I. - 820
Shigel'skii, O. A. - 74
Shiryeva, G. A. - 296
Shkol'nik, M. Ya. - 140
Shpota, V. I. - 690
Shul'gin, I. A. - 739
Shutova, E. A. - 728
Shvedskaya, Z. M. - 836
Shvydkaya, L. G. - 486
Sibel'dina, L. A. - 291
Sigareva, L. E. - 559
Skazhennik, M. A. - 728

Skuodene, L. P. - 273
Slavnova, T. D. - 917
Slonov, L. Kh. - 717
Smirnov, A. M. - 419
Soifer, V. N. - 785
Sokolov, O. A. - 645
Spakhov, Yu. M. - 65
Spakhova, A. S. - 65
Stambolova, M. A. - 848
Stom, D. I. - 131
Strogonov, B. - 359
Strogonov, B. P. - 813
Stvolinskii, S. L. - 982
Surgucheva, M. P. - 226
Suvorov, V. I. - 78
Syber, A. Yu. - 663
Sytnik, K. M. - 486

T

Tarikov, S. - 790
Témp, G. A. - 505
Teplova, E. A. - 967
Tikhomirova, V. Ya. - 576
Timofeeva, S. S. - 131
Tishchenko, N. N. - 908
Titov, Yu. B. - 785
Titova, Z. V. - 185, 399, 955
Troitskaya, E. A. - 505
Trubachev, I. N. - 43
Trunenkov, I. P. - 525
Trunova, T. I. - 831
Trushka, M. - 424
Tsibulya, L. V. - 580
Tsieminis, K. K. - 785
Tsoglin, L. N. - 291
Tueva, O. F. - 221, 699
Tuichibaev, M. U. - 868
Tumanov, I. I. - 309
Turetskaya, R. Kh. - 131
Tvorus, E. K. - 91, 961
Tyurina, M. M. - 1037

U

Udovenko, G. V. - 508, 893
Ukhina, S. F. - 399
Umarov, A. A. - 1057
Urmantsev, Yu. A. - 637
Usmanov, R. F. - 658

V

Vakhidova, L. R. - 745
Vakhmistrov, D. B. - 32, 448
Valovich, E. M. - 1042

Varakina, N. N. - 210
Vartapetyan, B. B. - 406, 669
Vasil'eva, V. E. - 999
Vasiliskov, V. F. - 285
Venchikova, T. A. - 658
Vereshchagin, A. G. - 542, 898
Veselovskii, V. A. - 406
Vladimirova, M. G. - 618
Vladimirseva, S. V. - 493
Vlasov, P. V. - 131
Vlasyuk, P. A. - 1018
Volkova, R. I. - 1067
Vollosovich, A. G. - 74
Volodarskii, A. D. - 618
Volovich, E. M. - 1042
Volynets, A. P. - 604
Vorob'ev, L. N. - 32, 448, 721, 861
Vorob'eva, E. A. - 399, 955
Vorob'eva, N. S. - 763
Voskresenskaya, N. P. - 367, 735

Y

Yaglova, L. G. - 433
Yakovlev, A. P. - 69
Yapparov, F. Sh. - 724
Yarchenkova, I. M. - 441
Yashchenko, V. K. - 74
Yasinovskii, V. G. - 428, 585
Yatsenko-Khmelevskii, A. A. - 296
Yazykov, A. A. - 585, 982
Yazykova, V. V. - 199
Yuferova, S. G. - 192
Yukhananova, L. N. - 745

Z

Zaitseva, M. G. - 185, 399, 955
Zakharin, A. A. - 455, 813
Zakharova, N. I. - 917
Zakrzhevskii, D. A. - 330, 555
Zemlyanukhin, A. A. - 851
Zhemkova, L. N. - 342
Zhirmunkaya, N. M. - 1024
Zhiznevskaya, G. Ya. - 178
Zholkevich, V. N. - 260, 699, 883
Zhukov, A. V. - 542, 818
Zhuravlev, Yu. N. - 873
Zhurbitskii, Z. I. - 571
Zlobina, É. S. - 712
Zoré, S. V. - 333, 394
Zubarev, T. N. - 428, 585, 982
Zvereva, G. N. - 831

J
E
D
B
I
C
K

TABLE OF CONTENTS

SOVIET PLANT PHYSIOLOGY

Volume 21, Numbers 1-6, 1974

(A translation of *Fiziologiya Rastenii*)

Volume 21, Number 1

January-February, 1974

Engl./Russ.

Equipotentiality of Cortical Cells of the Root — M. S. Krasavina	1	5
Total Dry Weight of Plants in Plantings as a Function of Value of the Cenotic Effect (A Mathematical Description of the Effect of Crowding in Plantings) — I. A. Murei and A. A. Nichiporovich	7	12
Automatic Optimization of Photosynthesis — V. L. Korbut	19	28
Nature of the Light-Dark Processes That Determine Ontogenesis of Nyctophobic Plants (on the Example of the Actinorhythmic Reaction of <i>Brassica carinata</i> L.) — B. S. Moshkov and N. V. Khovanskaya	22	33
Chloroplast Ultrastructure and Photosynthesis at Different Rates of Dehydration — E. B. Kurkova and M. V. Motorina	28	40
The Membrane Potential and Activity of Potassium Ions in Epidermal Cells of the Roots in <i>Trianea bogotensis</i> — P. V. Mel'nikov, L. N. Vorob'ev, D. B. Vakhmistrov, and Yu. A. Khitrov	32	45
Use of Various Dyes for Cytochemical Development of Histones in Plant Cells — Z. P. Ivanova and E. D. Kuznetsov	40	53
Lipids of <i>Chlorella vulgaris</i> under Conditions of Blocking of Biosynthesis by Biogenous Elements — G. S. Kalacheva and I. N. Trubachev	43	56
Effect of Chlorophyll Deficiency on Proline Metabolism in Higher Plants — E. Perdrizet . .	47	61
Seasonal Periodicity of Plant Regeneration from Meristem Tips of Raspberry — S. E. Shchelkunova	54	69
Isoenzyme Composition of o-Diphenoloxidase in Different Organs of Grape — S. V. Durmishidze, O. T. Khachidze, and G. N. Pruidze	59	75
Changes of Phosphorus Metabolism in Woody Plants during the Process of Biochemical Interaction — A. S. Spakhova and Yu. M. Spakhov	65	82
Study of Phosphorus Metabolism in Germinating Seeds of Hybrid and Inbred Corn — A. P. Yakovlev and M. F. Ovchinnikova	69	87
Emission Spectral Analysis of the Content of Certain Trace Elements in Cultures of Isolated Tissues and Intact Medicinal Plants — O. A. Shigel'skii, V. K. Yashchenko, R. G. Butenko, and A. G. Vollosovich	74	93
Preservation of Turpentine Composition during Changes in the Physiological State of Pine Trees — A. V. Chudnyi, E. P. Prokazin, and V. I. Suvorov	78	98
Metabolic Regulation of Plant Adaptation to Conditions in Temporary Anaerobiosis — T. V. Chirkova, I. V. Khazova, and T. P. Astafurova	82	102
Regulating Role of Transpiration in the Temperature Regime of Dry Fruits — A. A. Prokof'ev, B. A. Rybalova, and K. M. Kats	87	108
Effect of a Water Deficit on the Functional Activity of Cytoplasmic Ribosomes in Wheat Leaves and the Isoenzyme Spectrum of Cytoplasmic Ribonuclease — P. A. Genkel', N. A. Satarova, G. I. Blekhman, and E. K. Tvorus	91	113
Determining the Rate of Phosphorylation as a Means of Judging Changes of Respiration Energetics during a Temperature Increase — O. A. Semikhatova and I. A. Daletskaya . .	97	121
Protective Action of the Endosperm or Cotyledons during Drying of Germinated Seeds — A. Z. Livshin and G. A. Samygin	101	126
Changes of Respiratory Metabolism in Wheat Seedlings under the Influence of Frosts — N. I. Bakumenko	108	135

	Engl./Russ.	
Mechanism of Frost Resistance in Highly Resistant Shoots — A. Sakai	113	141
Mechanism of the Action of Isopropyl-N-3-chlorophenyl Carbamate on Root Growth — E. I. Bystrova	118	148
Effects of Phytohormones on RNA Synthesis in Isolated Cotyledons of Pumpkin — M. I. Erkeev	125	156
Quinones as Intermediate Products in Oxidation of Certain Phenolic Growth Inhibitors — Le Thi Muoi, D. I. Stom, V. I. Kefeli, R. Kh. Turetskaya, S. S. Timofeeva, and P. V. Vlasov	131	164
Content of Free Amino Acids in Pea Varieties with Different Resistance to Powdery Mildew — V. E. Kitsno, N. N. Kirik, and O. K. Kondratyuk	136	169
SURVEYS		
General Conception of the Physiological Role of Boron in Plants — M. Ya. Shkol'nik	140	174
PRACTICAL APPLICATIONS		
Use of Presowing Seed Hardening in Sunflower Seed Growing — P. A. Filatov and R. I. Frolova	151	187
Mercury 2-Hydroxyethyl Nitrate: A Defoliant of a new Type — Yu. V. Rakitin.	155	192
METHODS		
Comparison of Water Flux Amplitudes in Plants under Conditions of an Autooscillatory Water Metabolism Regime — S. N. Meleshchenko and V. G. Karmanov	167	205
Use of Ion-Selective Electrodes to Study Absorptive Activity of the Root System in Plants — G. B. Maksimov, N. G. Osmolovskaya, N. A. Razumova, A. L. Grekovich, and A. A. Belyustin.	172	211
REVIEWS		
V. L. Kretovich. Nitrogen Metabolism in Plants — Reviewed by G. Ya. Zhiznevskaya	178	219
I. A. Shul'gin. The Plant and the Sun — Reviewed by F. F. Matskov	182	222

Volume 21, Number 2 March-April, 1974

Oxaloacetate Inhibition in the Mitochondria of Wheat Roots — M. G. Zaitseva and Z. V. Titova	185	229
Certain Properties of the System of Oxalate and Malonate Photooxidation in the Chloroplasts — R. M. Bekina, G. G. Lysenko, and S. G. Yuferova	192	238
Ammonium Induction of Glutamate Dehydrogenase in Lupine Seedlings — V. L. Kretovich, T. I. Karyakina, V. V. Yazykova, and T. G. Florenskaya	199	247
Study of Chemical Composition, State of Water, and Certain Functional Indices of Mitochondria of Winter Wheat — L. P. Khokhlova, G. A. Denisova, N. I. Rykalova, and R. G. Khazhina	203	252
Effect of Inhibitors of Mitochondrial Electron Transport on Respiration of Root Growth Zones of Corn — N. N. Varakina and É. E. Khavkin	210	260
Electron-Microscopic Study of Water-Salt Exchange in Cells of Plant Tissues — L. Kh. Gordon, A. I. Golubev, A. S. Murav'eva, and N. N. Gerasimov	216	268
Significance of Activity of the Roots for Nuclein and Protein Metabolism of the Leaves under Conditions of the Aftereffect of Phosphorus Starvation — O. N. Kazuto and O. F. Tueva	221	272
Phosphorus Uptake by Barley Seedlings from Phosphorus-Labelled Sodium Ortho- and Pyrophosphates — M. P. Surgucheva, Yu. M. Kaptsynel', A. D. Popazova, and O. F. Kazantseva	226	278
Evolution of Proteins Containing Nonhemin Iron in Plants — E. A. Boichenko and L. N. Gryzhankova	230	283
Dynamics of Lipid Content and Composition in Germinating Uredospores of the Agent of Wheat Stem Rust — V. V. Chigrin, and L. M. Bessmel'tseva	234	289
Extracellular Phenolic Products of Certain Blue-Green Algae — V. N. Kozitskaya	240	296
Physiological Activity of a Total Preparation of Isoflavone Glycosides Isolated from Yellow Lupine (<i>Lupinus luteus</i>) — N. A. Laman	244	301

Effect of Nitrogen Nutrition on Photosynthesis, Carboxylating Enzymes, and Phosphoglyceric Aldehyde Dehydrogenase in Bean and Corn Plants Cultivated at Different Light Intensities — T. A. Avdeeva, T. F. Andreeva, and A. A. Nichiporovich	250	308
Oxygen Regime of the Rootstocks of Common Reed — L. I. Krasovskii and V. A. Chashukhin	255	315
Microcalorimetric and Gasometric Investigation of Pollination in Rye — E. A. Britikov, V. N. Zholkevich, T. A. Borisova, N. A. Musatova, and L. V. Kovaleva	260	320
Factors Determining Different Levels of Protein Accumulation in the Grain of High- and Low-Protein Varieties of Wheat — A. N. Pavlov and T. I. Kolesnik	267	329
Content of IAA in Shoots of Norway Spruce as a Function of Growth Phases and Development Classes of the Trees — A. I. Merkis and L. P. Skuodene	273	336
The Role of Native Abscisic Acid in Dormancy of the Seeds of Tatar Maple — V. N. Petrova and M. G. Nikolaeva	279	343
Content of Growth Substances in Awnless Brome Plants Differing with Respect to Their Capacity for Reproductive Development under Conditions of the Far North — L. V. Romanova and V. F. Vasiliskov	285	351
Mass Cultivation of Microalgae in Heavy Water — A. V. Lazareva, M. S. Okon, V. P. Kutyshenko, L. N. Tsoglin, L. P. Kayushin, V. E. Semenenko, L. A. Sibeldina, and L. N. Chekulayeva	291	359
Cultivation of Green Isolated Tissues of Spruce Seedlings on an Artificial Medium — G. A. Shiryaeva and A. A. Yatsenko-Khmelevskii	296	365
Changes in the Range of Functions in Generations of Corn during Increase of Drought Resistance — B. I. Shcherbakov	303	373
Increasing the Capacity of Woody Plants for Frost Hardening by Treating Them with Extracts of Natural Growth Inhibitors — I. I. Tumanov, G. V. Kuzina, and L. D. Karnikova	309	380
Toxicity of Alkaline Cations for Tomato Plants — V. V. Kabanov and N. A. Myasoedov	318	391
Metabolic Activity of Cellular Structures in Cotton Plants Infected with the Fungus <u>Verticillium dahliae</u> Kleb. — L. S. Plekhanova, Zh. G. Gevorkyan, Sh. Safarov, and A. P. Ibragimov	324	398
BRIEF COMMUNICATIONS		
Limiting Anaerobic Potential and Electrode Activity of the System as a Function of Degree of Disintegration of the Plant Cell — D. A. Zakrzhevskii and Yu. E. Kalashnikov	330	405
Reduction of Cytochrome c by the Flavin Nucleotide Reductase System of Pea Leaves — P. A. Kolesnikov, S. V. Zoré, K. V. Pshenova, A. A. Mutuskin, E. I. Petrochenko, and L. E. Makovkina	333	407
METHODS		
Study of the Quality of Work Performed by a System of Automatic Optimization of Plant Photosynthesis by the Method of Mathematical Modeling — V. L. Korbut	336	411
Fractionation of Nucleic Acids of Barley on Different Exchange Columns — V. I. Porollo, L. N. Zhemkova, L. G. Moshkina, and N. E. Sharova	342	418
Comparison of Methods for Quantitative Determination of Nucleic Acids in Tissues and Organs of Higher Plants — S. A. Golyanovskaya, T. V. Bavrina, T. N. Konstantinova, O. A. Molodyuk, and N. P. Aksanova	349	427
Academician Aleksandr Ivanovich Oparin on the Occasion of His 80th Birthday	357	437

Volume 21, Number 3 May-June, 1974

Origins and Development of Plant Physiology at the Academy of Sciences of the USSR		
— B. Stroganov	359	445
Effect of Oxygen Concentration on Carbon Dioxide Exchange in Beans and Corn		
— N. P. Voskresenskaya, M. A. Polyakov, and L. T. Karpushkin	367	455
Action Spectrum of Molecular Hydrogen Photoproduction by <u>Chlorella</u>		
— V. P. Oshchepkov and A. A. Krasnovskii	373	462

Photooxidative Decarboxylation of Organic Acids in Chloroplasts and Its Connection with Photorespiration — R. M. Bekina, G. G. Lysenko, and B. A. Rubin	378	468
Water Content in Leaves of Plants in Plantings as a Function of the Value of Cenotic Action — I. A. Murei and A. A. Nichiporovich	385	477
NADP · H ₂ (NAD · H ₂): Flavin Nucleotide Oxidoreductase of Green Plants — P. A. Kolesnikov, S. V. Zoré, K. V. Pshenova, A. A. Mutuskin, E. I. Petrochenko, and L. E. Makovkina	394	489
Disturbance of Energy Regulation in the Mitochondria of Wheat Roots — M. G. Zaitseva, Z. V. Titova, S. F. Ukhina, and E. A. Vorob'eva	399	494
Study of Molecular Oxygen Transport from the Overground Parts to the Roots of Plants by the Method of Chemiluminescence — B. B. Vartapetyan, L. P. Agapova, A. A. Aver'yanov, and V. A. Veselovskii	406	502
Substrate Regulation of Glycolysis in Growing and Mature Cells of Corn Seedlings. Concentration of Metabolites and Saturation of Key Enzymes — Z. I. Naumova and É. E. Khavkin	409	506
Effect of Amino Acids on Activity of Glutamine Synthetase in Pea — A. V. Pushkin, Z. G. Evstigneeva, and V. L. Kretovich	414	512
Metabolism of Asparagine and Glutamine in Isolated Roots of Alfalfa — S. F. Izmailov, L. A. Arman, and A. M. Smirnov	419	518
Certain Physicochemical Properties of the Cytoplasm as a Function of Energy Metabolism — P. A. Genkel', V. V. Levina, and M. Trushka	424	525
Bioelectrical Characteristics of <u>Acetabularia mediterranea</u> at Different Stages of Morphogenesis — T. N. Zubarev, N. P. Rogatykh, and V. G. Yasinovskii	428	529
Analysis of the Photoinduced Ion Flux during Fixation of Voltage on the Plasmalemma of Cells of <u>Nitella flexilis</u> (Brief Intervals of Illumination) — V. A. Bobrov, G. A. Kurella, and L. G. Yaglova	433	535
Participation of Free Radicals in the Mechanism of Action Potential Propagation in Cells of the Conducting Systems of Higher Plants — V. A. Opritov, V. A. Kalinin, and I. M. Yarchenkova	441	545
Differences in Absorption of Potassium by Root Hairs and Hairless Cells of the Root Epidermis in <u>Trianea bogotensis</u> — D. B. Vakhmistrov, P. V. Mel'nikov, and L. N. Vorob'ev	448	554
Fractional Analysis of the Mineral Composition of Pea Roots on the Basis of the Electrochemokinetic Method — A. A. Zakharin	455	563
Peculiarities of Ultrastructure of the Storage Parenchyma in Sugar Beet Roots — Yu. P. Bolyakina, and V. P. Kholodova	463	573
Structural Bases of Interrelationships between the Symplast and Apoplast in the Root of <u>Beta vulgaris</u> during the Period of Assimilate Influx from the Leaves — N. V. Paramonova	468	578
Growth, Organogenesis, and Protein-Nuclein Metabolism at Different Stages in the Development of Calluses of Trapezoid Tobacco — T. V. Bavrina, S. A. Golyanovskaya, N. P. Aksanova, T. N. Konstantinova, and É. L. Milyaeva	478	589
Cultivation of Isolated Protoplasts — Yu. Yu. Gleba, L. G. Shvydkaya, R. G. Butenko, and K. M. Sytnik	486	598
Effect of Maleic Hydrazide on Germination of Potato Tubers and Content of Protein and Nucleic Acids in Their Buds — Yu. V. Rakitin, S. V. Vladimirtseva, and L. N. Nikolaeva	493	606
Changes in Content and Composition of Triglyceride Fatty Acids during Recovery of Chlorella Cells after Nitrogen Starvation — G. L. Klyachko-Gurvich	498	611
Effect of Boron Deficits on Activity of β -Glucosidase in Sunflower — A. N. Maevskaia, E. A. Troitskaya, and G. A. Témp.	505	619
Effect of Salinization on the State and Activity of the Photosynthesis Apparatus in Plants — G. V. Udovenko, L. A. Semushina, V. S. Saakov, V. I. Galkin, V. A. Koshkin, and T. A. Kunchenko	508	623
Effect of Increased Temperature on Generative Cells — N. V. Balina	514	630

Engl./Russ.

Cytophotometric Investigation of DNA Content in Nuclei of Cells of Normally and Pathologically Growing Tissues of Corn Seedlings Infected with <u>Ustilago maydis</u> — A. Ya. Perova and O. B. Mikhalevskaya	521	636
BRIEF COMMUNICATIONS		
Effect of Pantothenic Acid and Its Antagonists on Cotton Plants Infected with <u>Verticillium dahliae</u> — I. P. Trunenkov, M. D. Piskunov, and K. S. Bokarev	525	641
Effect of Rapid Opening of Stomates in the Dark at a Temperature Lethal for Plants — L. N. Babushkin and K. A. Barabal'chuk	529	644
PRACTICAL APPLICATIONS		
Individual Productivity of Plants — B. S. Moshkov	532	647
Physiological Basis of Effective Water Utilization on Irrigated Lands — N. S. Petinov	537	653
METHODS		
An Instrument for Quantitative Extraction of Lipids from Plant Material — A. V. Zhukov and A. G. Vereshchagin	542	659
Prevention of Inactivation of the Photochemical Systems of Bean Chloroplasts during the Process of Isolation — M. K. Nikolaeva and O. P. Osipova	547	664

Volume 21, Number 4 July-August, 1974

Oxygen Evolution by Leaves of Higher Plants in the Long-Wave Region of the Spectrum ($\lambda > 700$ nm) — V. M. Kutyurin, D. A. Zakrzhevskii, and Yu. E. Kalashnikov	555	677
The Mechanism of Action of Sulfhydryl Compounds on the Phosphorylating Activity of Isolated Chloroplasts — V. F. Gavrilenko, B. A. Rubin, L. E. Sigareva, and N. V. Budagovskaya	559	682
Investigation of the Light-Stimulated Bioelectrical Response in Leaves of Etiolated Plants during the Process of Greening — I. A. Rybin, S. A. Mikheeva, and V. V. Obolonskii	566	692
A New Factor in Photosynthesis — Z. I. Zhurbitskii and N. S. Chaplygina	571	698
Dynamics of Cellulose Accumulation and Activity of Invertase in Flax Stems — V. Ya. Tikhomirova	576	704
Effect of Cytokinin on Growth of Discs from Etiolated Beam Leaves — O. N. Kulaeva and L. V. Tsibulya	580	709
Bioelectrical Potentials of Isolated Nuclei of <u>Acetabularia</u> — A. A. Yazykov, N. P. Rogatykh, V. G. Yasinovskii, and T. N. Zubarev	585	714
Effects of Endogenous and Exogenous Polyphenols on Metabolism and Activity of IAA in Suspension Cultures of Tobacco Tissue — N. I. Rekoslavskaya, K. Z. Gamburg, and L. V. Gamanets	591	721
Effects of Temperature and Light Conditions on Content of Endogenous Growth Substances in Catkins of Alder and Filbert during the Period of Deep and Induced Dormancy — A. K. Fedorov, L. P. Chel'tsova, and N. I. Lebedeva	597	728
Flavonoids in Ontogenesis of Yellow Lupine (<u>Lupinus luteus</u> L.) — N. A. Laman and A. P. Volynets	604	737
The Process of Vacuolization in Lupine Root Tips — N. G. Potapov and L. G. Kosulina	612	746
Study of the Antigen Structure of Two Strains of Chlorella with Different Physiological-Biochemical Properties — T. I. Kasatkina, N. G. Tikhonovskaya, M. G. Vladimirova, A. D. Volodarskii, and V. E. Semenenko	618	752
Protein Bodies of Rice Endosperm as Lysosome Systems — V. G. Shcherbakov, D. I. Ivanova, and S. A. Fedorova	623	756
Dynamics of Accumulation of Nitrogenous Compounds and Metabolism of Amino Acids during the Process of Grain Plumping in Spring Wheat at Different Ratios of Magnesium and Calcium in the Nutrient Medium — M. N. Kondrat'ev, A. S. Pleshkov, and B. P. Pleshkov	629	762

Isomerism in Living Objects. Investigations of Properties of Biological Isomers (on the Example of Corollas and Capsules of Low Flax) — Yu. A. Urmantsev and A. V. Kaverina.....	637	771
Localization of Anabolism and the Probability of Conversion of Organic Acids to Carbohydrates during Ripening of Grapes — Ya. T. Kirikoi and O. A. Sokolov	645	780
Dynamics of Nucleic Acids during Formation of Starting and Hybrid Seeds <i>in Nicotiana</i> — L. I. Musatenko and V. P. Bannikova	652	788
Participation of Ethylene in Metabolic Shifts Induced by 2,4-D — N. M. Éidel'nant, I. V. Esipova, T. A. Venchikova, R. F. Usmanov, and A. M. Danil'chenko.....	658	794
Effect of Air Humidity on the Conductivity of Stomates and Mesophyll of Bean Leaves at Two Values of Soil Moisture — Kh. A. Moldau and A. Yu. Syber.....	663	800
Respiration of Coleoptiles of Anaerobically Cultivated Rice Seedlings — B. B. Vartapetyan and A. I. Maslov	669	807
Stimulating Action of Small Doses of Sodium Chloride on Sugar Beet — P. A. Genkel' and L. V. Bakanova	673	812
Admission of Strontium-90, Potassium, and Calcium into Oat Plants from the Soil during Ontogenesis — Z. A. Baranova and A. S. Frid	679	819
Effect of Chlorides of Alkaline Elements on Ionic Composition of the Organs in Tomato — N. A. Myasoedov and V. V. Kabanov	684	826
Conditions of Hardening and Frost Resistance of Winter Cruciferous Plants — V. I. Shpotá and É. V. Bochkareva.....	690	833
Growth-Stimulating and Inhibiting Substances in Leaves of Tobacco Varieties Susceptible, Resistant, and Immune to Peronosporosis — É. S. Avundzhyan and M. M. Shaldzhyan..	693	837
Investigations of O. M. Trubetskova on Physiology of the Root System — P. A. Genkel', V. N. Zhokhevich, and O. F. Tueva	699	844
SURVEYS		
Phytotrons in Different Countries — N. G. Bilderling	702	848
BRIEF COMMUNICATIONS		
Growth of Buds of Trees and Bushes during the Autumn-Winter-Spring Period — É. S. Zlobina.....	712	860
Wind Energetics of Plants — G. G. Golovchenko.....	714	861
Changes of Nucleic Acid Content in Leaves of Staminate and Pistillate Hemp Plants as a Function of Nutrition Conditions and Soil Moisture — L. Kh. Slonov.....	717	864
Effect of Temperature on the State of the Membrane System in Cells of the Charophytic Alga <i>Nitellopsis obtusa</i> — Yu. P. Fedulova and L. N. Vorob'ev	721	867
PRACTICAL APPLICATIONS		
Stimulation of Germination of Sugar Beet Seeds Achieved by Treating Them with Solutions of Sodium Salts — F. Sh. Yapparov and F. M. Iskhakov	724	870
METHODS		
A Recording Microdensitometer for Scanning Electrophoregrams in Polyacrylamide Gel — V. V. Chigrin, B. V. Filin-Koldakov, E. A. Shutova, V. P. Lanetskii, M. A. Sautich, V. M. Evseev, M. A. Skazhennik, and Yu. V. Gopalo	728	875
BOOK REVIEWS		
D. M. Grodzinskii. Plant Biophysics — Reviewed by A. S. Okanenko	733	881
CHRONICLES		
The First All-Union Symposium on Photoregulation of Plant Metabolism and Morphogenesis — N. P. Voskresenskaya and I. S. Drozdova	735	883
Arkadii Semenovich Okanenko: on the Occasion of His 80th Birthday	738	885

Volume 21, Number 5 September-October, 1974

Physiological Characteristics of Long-Stemmed and Short-Stemmed Forms of Sunflower — I. A. Shul'gin, S. V. Klimov, and A. A. Nichiporovich	739	893
Effects of Inhibitors of RNA and Protein Synthesis on the Content and State of Photosynthetic Pigments in Cotton Seedlings — Kh. Kh. Karimov, Yu. E. Giller, S. V. Dontsova, L. R. Vakhidova, and L. N. Yukhananova	745	900
Effect of Conditions of Phosphorus Nutrition on Photosynthesis and Activity of Carboxylating Enzymes in Bean and Corn Plants — T. A. Avdeeva and T. F. Andreeva	753	909
Ultrastructural Changes in Cells of Apple Pericarp during Ripening and Aging — T. A. Platonova, E. G. Sal'kova, and L. V. Metlitskii	758	915
Effect of β -Indolylacetic Acid on Seed Germination and Embryo Growth and Its Interaction with Other Hormones — M. G. Nikolaeva, E. N. Polyakova, T. V. Daletskaya, V. N. Petrova, and N. S. Vorob'eva	763	919
Comparison of the Antigen Composition of Cellular Nuclei from Calluses with Different Types of Morphogenesis — O. I. Molodyuk, T. N. Konstantinova, T. V. Bavrina, and N. P. Aksanova	769	927
"Soluble Proteins" of Wheat Caryopses during the Process of Their Development — V. G. Konarev, A. N. Pavlov, I. F. Shayakhmetov, and T. I. Kolesnik	772	931
Capacity of Wheat Coleoptile Cells for Specific Binding of Auxin and Effect of the Hormone on Template Activity of Chromatin in Seedlings of Different Ages — T. V. Likholat, V. A. Pospelov, T. M. Morozova, and R. I. Salganik	779	939
Incorporation of H^3 - and C^{14} -Thymine and Thymidine into DNA at the Early Stages of Plant Development and Production of Highly Labelled DNA of Plants — V. N. Soifer, K. K. Tsieminis, and Yu. B. Titov	785	946
Gibberellin-Like Substances in Cotton Seeds — S. Tarikov and A. I. Imamaliev	790	952
Cytological Investigation of Protein Deposit Formation in the Endosperm of Rice — D. I. Ivanova	795	958
Changes in the Protein Complex of Germinating Cotton Seeds after Treatment with Nicotinic Acid — L. A. Polyanskaya and M. V. Batyrova	800	963
Sugar Content in Corn Seeds of Different Viability — K. E. Ovcharov and Yu. P. Koshelev .	805	969
The State of Water in Plant Tissues at Negative Temperatures under Natural Conditions — L. I. Krasovskii and V. A. Chashchukhin	809	975
Effect of High Concentrations of Sodium Chloride on the Fractional Mineral Composition of Pea Roots — A. A. Zakharin and B. P. Strogonov	813	980
Sulfate Activation in the Presence of Excesses and Deficiencies of Sulfur — N. I. Shevyakova and M. Kholobrada	820	988
Effect of Soil Salinization on Growth and Development of Peach — A. S. Ivanova	826	995
Protective Action of Sugars during Freezing of a Chloroplast Suspension — T. I. Trunova and G. N. Zvereva	831	1000
Carbohydrate-Protein Depletion of Winter Crops during Physiological Exhaustion — A. S. Kruzhilin and Z. M. Shvedskaya	836	1007
Effect of 2,4-D on Riboflavin Metabolism — V. I. Artamonov	842	1014
Invertase Activity and Sugar Content in Cultures of Sugar Beet Tissue Cultivated on a Medium Containing Chloramphenicol — A. A. Angelova, A. I. Atanasov, M. A. Stambolova, and T. K. Nikolov	848	1021
Investigation of Metabolism of γ -Aminobutyric Acid in Pea Seedlings under Conditions of Different Gas Composition of the Atmosphere — A. A. Zemlyanukhin, A. M. Makeev, B. F. Ivanov, and A. N. Ershova	851	1025
Effect of Filtrates of Culture Media of the Algae <u>Skeletonema costatum</u> and <u>Thalassionema nitzschiooides</u> on Their Own Growth — N. G. Kustenko	858	1034
Changes in Electrochemical Properties of Cells of <u>Nitella</u> and <u>Nitellopsis</u> under the Influence of Bicarbonates — L. N. Vorob'ev, P. V. Mel'nikov, and Yu. A. Khitrov .	861	1038

The Role of Kinetin and Indolylacetic Acid in Resistance of Cotton to Verticilliose Wilt — A. A. Abrarov, M. U. Tuichibaev, A. P. Ibragimov, and Kh. Kh. Sagdullaev	868	1047
Effect of Infection with TMV on Distribution of Exogenous IAA-C ¹⁴ throughout Tobacco Plants — Yu. N. Zhuravlev and V. I. Malinovskii	873	1053
Study of Growth of Petunia Styles — H. F. Linskens	878	1059
Problems of the Physiology of Pollination and Fertilization in Plants as Treated in the Investigations of E. A. Britikov — M. Kh. Chailakhyan and V. N. Zholkevich	883	1065
BRIEF COMMUNICATIONS		
Action Spectra of the Transient Bioelectrical Response of Plant Leaves — I. A. Rybin and V. V. Obolonskii.	887	1071
The Physiology of Potato Plants Infected with Viral Diseases — V. M. Chmulev.	890	1074
Dynamics of DNA and RNA Content in Leaves of Wheat during Ontogenesis — G. V. Udovenko and L. A. Gogoleva.	893	1076
PRACTICAL APPLICATIONS		
Drought Resistance of Introduced Species of Larch under Conditions of the Central Forest-Steppe — A. V. Lukin	895	1079
METHODS		
Extractability of Lipids from Soybean Seeds — A. V. Zhukov and A. G. Vereshchagin.	898	1083
Isolation of Protochlorophyllide-Holochrome from Etiolated Barley Leaves by the Method of Gel Chromatography — R. M. Rotfarb, G. M. Podchufarova, T. F. Derevtsova, and V. L. Kaler.	903	1090
A Method for Determining Phosphoenolpyruvate Carboxylase by Means of Disk Electrophoresis in Polyacrylamide Gel — I. M. Magomedov and N. N. Tishchenko	908	1095
CURRENT EVENTS		
All-Union Symposium on Plant Energetics — G. M. Novikova	910	1098
On the 80th Birthday of I. I. Tumanov, Corresponding Member of the Academy of Sciences of the USSR.	913	1100
ERRATUM	916	

Volume 21, Number 6 November-December, 1974

Investigation of Structural Differences in Pigment-Protein Complexes of Photosystems I and II — N. I. Zakharova, T. D. Slavnova, E. Sh. Lugovaya, A. K. Chibisov, V. M. Kutyurin, and A. V. Karyakin.	917	1109
Connection between Metabolism of Labelled Carbon in Chlorella with Work of Photosystems I and II — T. A. Glagoleva and T. N. Rodygina	923	1116
Photosynthesis of Leaves Subjected to Brief Impulses of CO ₂ . The Carboxylation Reaction in Vivo — A. Kh. Laisk and V. M. Oya	928	1123
Chloroplast Dynamics in Potato Leaves — A. T. Mokronosov and R. I. Bagautdinova	936	1132
Photosynthesis and Productivity of Leguminous Crops in the North Caucasus — A. A. Kornilov	942	1139
Intensive Cultivation and Certain Physiological Characteristics of <u>Dunaliella salina</u> TEOD. — A. A. Abdullaev and V. E. Semenenko	947	1145
Changes in Properties of the Mitochondria of Wheat Roots Associated with Plant Age — M. G. Zaitseva, E. A. Vorob'eva, and Z. V. Titova	955	1154
Intracellular Distribution of Ribonuclease Activity in Leaves of Wheat Seedlings and Certain Factors Behind Its Increase in the Cytoplasmic Fraction under the Influence of Drought — G. I. Blekhman and E. K. Tvoros	961	1161
Activity and Isoenzyme Composition of Acid Phosphatase in Hybrids and Lines of Corn — I. V. Lukashevich, I. G. Khammatova, A. I. Levina, E. A. Teplova, and P. S. Fedorov	967	1168

Electrophoretic Study of Peroxidase, Polyphenol Oxidase, and Indolylacetic Acid		
Oxidase in Tulip Plants — R. A. Lisitsyna and I. Rakhimbaev	972	1174
Electrophoretic Properties of Carboanhydrase from Tomato Chloroplasts		
— A. V. Kositsin and G. B. Khalidova	975	1178
Preparative Disk Electrophoresis of Storage Proteins of the Grain Used to Study		
the Amino Acid Composition of Their Components — Yu. V. Peruanskii	979	1182
Morphogenetic Activity of the Nuclei in <u>Acetabularia</u> — A. B. Alekseev, M. I. Betina,		
E. V. Degterev, T. N. Zubarev, S. L. Stvolinskii, and A. A. Yazykov	982	1186
Membrane Potentials in Cells of the Epidermis of Pumpkin Stems — I. N. Ktitorova,		
O. O. Lyalin, and A. A. Khabarova	990	1196
On Controlling the Water Regime of a Plant by Influencing Its Root System		
— S. N. Meleshchenko	994	1201
Effect of Carbon Dioxide Starvation on Certain Blue-Green Algae — V. E. Vasil'eva		
and M. G. Levitin	999	1207
Composition of Transported Assimilates in Connection with Nitrogen-Phosphorus		
Nutrition of Plants — M. S. Kamanina and A. A. Anisimov	1003	1212
Metabolism of Amino Acids in Isolated Roots and Root Callus Tissues of <u>Vicia sativa</u> L.		
— S. F. Izmailov	1008	1217
Effect of Alkaline Elements on Composition of Nitrogen-Containing Compounds		
of Tomato Leaves — V. V. Kabanov and N. A. Myasoedov	1013	1223
Composition of DNP of Condensed and Diffuse Chromatin in Plants as a Function		
of Their Manganese Ion Supply — P. A. Vlasyuk, Z. M. Klimovitskaya,		
Z. I. Lobanova, and L. M. Prokopivnyuk	1018	1230
Changes in Sorption of Certain Dyes by Detached Pea Roots under the Influence of 2,4-D		
— N. M. Zhirmunskaya and A. S. Kupriyanova	1024	1237
Kinetics of Secretion of Water-Soluble Organic Compounds from Cells of the Roots		
of Plants under the Influence of Carbamide and Sodium Azide		
— A. A. Shapovalov	1029	1243
Lysis of the Nucleus and Nuclear Membrane in Frozen Cells of Cereal Coleorhizae		
— T. P. Petrovskaya-Baranova	1033	1248
Investigation of the Water Regime of Clonal Apple Stocks during Propagation by Means		
of Green Slips — T. B. Prokhorova, M. M. Tyurina, and F. Ya. Polikarpova	1037	1252
On the Minimal Temperature of Seed Germination — E. M. Valovich and V. G. Griff	1042	1258
Rate of Growth of Plants in Plantings under Conditions of Crowding		
— I. A. Murei	1048	1265
Search for Correlations between Herbicide Activity and Chemical Structure of Certain		
Benzimidazole Derivatives — Ch. Sh. Kadyrov, A. T. Ayupova, A. A. Umarov,		
N. P. Loi, and G. A. Nezhinskaya	1057	1276
BRIEF COMMUNICATIONS		
Determination of Residual Amounts of Furfural in Plants — S. I. Khramova		
and K. S. Bokarev	1062	1282
Evolution of Carbon Dioxide through the Leaf Cuticle in the Process of Respiration		
— N. I. Antipov	1064	1284
PRACTICAL APPLICATIONS		
Effect of Chlorocholine Chloride on Growth, Tuber Formation, and Frost Resistance		
of Potato Plants — R. I. Volkova, L. D. Prusakova, S. N. Drozdov,		
and R. P. Ivanova	1067	1287
METHODS		
Determination of CO₂, O₂, and N₂ by the Gas-Chromatographic Method		
— V. Yu. Rakitin and L. Yu. Rakitin	1072	1293
REVIEWS		
V. I. Kefeli. Natural Growth Inhibitors and Phytohormones Plant Growth		
— Reviewed by P. A. Genkel' and T. N. Pustovoitova	1075	1297

Engl./Russ.

INDEX

Author Index, Volume 21, Numbers 1-6, 1974	1081
Tables of Contents, Volume 21, Numbers 1-6, 1974	1085

